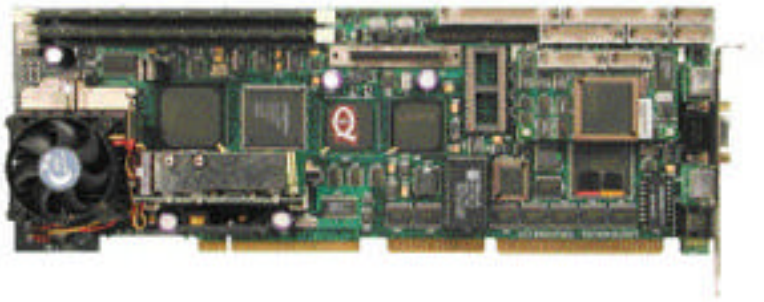
PCI/ISA Single Board Computer LBC8540



- Intel Celeron Processor up to 733 MHz
- Intel 440BX Chipset with 66MHz FSB
- 32-bit / 33MHz PCI Bus
- Up to 512 MB SDRAM
- PCI Video with Flat Panel Support
- PCI 10/100 Base-T Ethernet
- PCI EIDE Controller
- Flash Disk Support
- PCI Ultra-wide SCSI
- 2 Floppy, 2 Serial, 1 Parallel, and 1 USB Port
- System Monitor

SPECIFICATIONS:

PROCESSOR
INTEL Celeron (PPGA) with 66MHz front side bus. This will allow the use of 300, 466, and 700MHz processors. Processor includes 128KB of L2 Cache.

MEMORY
Up to 512MB using SDRAM

MEMORY ORGANIZATION
2 banks of 72 bit (168 pin) 3.3V SDRAM DIMMS

PCI BUS SPEED
33MHz

BIOS
DTI Enhanced PHOENIX Plug-n-Play Compliant

PCI IDE
EIDE support, PIO modes 0 to 4, bootable CDROM

PCI SCSI
Adaptec 7880 Ultra/Wide

PCI ETHERNET
Intel 82558 10/100 BASE-T auto-negotiating

PCI VIDEO
C&T 69000 with 2MB video memory and flat panel support

USB
UHCI compatible host controller with one port

FLASH DISK
ISA Solid State Hard Drive up to 72MB

KEYBOARD
/AT & PS/2 Compatible

MOUSE PORT
PS/2 Compatible

REALTIME CLOCK
Includes 114 bytes of CMOS RAM with long life battery

PHYSICAL
4.2 x 13.3 inches

HUMIDITY
0%-95% Non-Condensing

POWER
TBD

FEATURES:

MEMORY
The LBC8540 supports up to 512MB of system memory using two standard 168-pin 3.3V SDRAM DIMMs.

PCI BUS
The LBC8540 provides direct support for up to 4 PCI slots. The PCI system bus operates at 33MHz and supports PCI Burst transfer speeds up to 132MB/s.

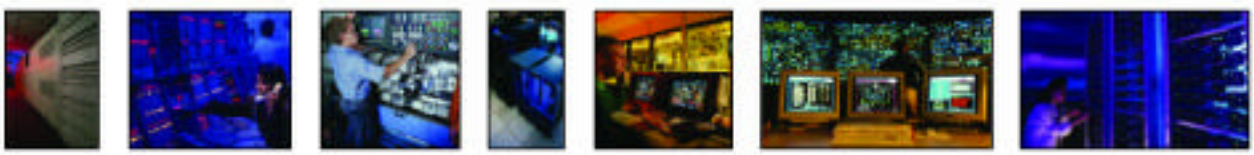
ISA BUS
The LBC8540 provides an interface to the ISA Bus with DTI's enhanced buffering to reduce loading issues that can occur with high slot count backplanes.

SYSTEM MONITOR
The LBC8540 includes DTI's standard system monitor which provides environmental monitoring of all system temperatures and voltages (CPU, System, Ambient, Remote). The System Monitor also features fan/switch monitoring through eight inputs, a built-in two stage watchdog timer, alarming mechanism for failure reporting, a dedicated serial port for remote communication through a modem or CPU-CPU connection, and a general scratch pad area.

PCI Video
The LBC8540 uses the C&T 69000 to provide enhanced 3D graphics performance and flat panel support. 2MB of synchronous graphics memory is built into the 69000.

PCI SCSI
The LBC8540 provides a high performance Ultra-Wide SCSI interface allowing data transfers to reach 40 MB/s using the Adaptec 7880 controller.

PCI Ethernet
The LBC8540 supports a fully auto-negotiating 10/100 Base-T connection, and full duplex operation which allows data rates to reach 20Mbps and 200Mbps. This interface is based on the Intel 82558 Network Controller.



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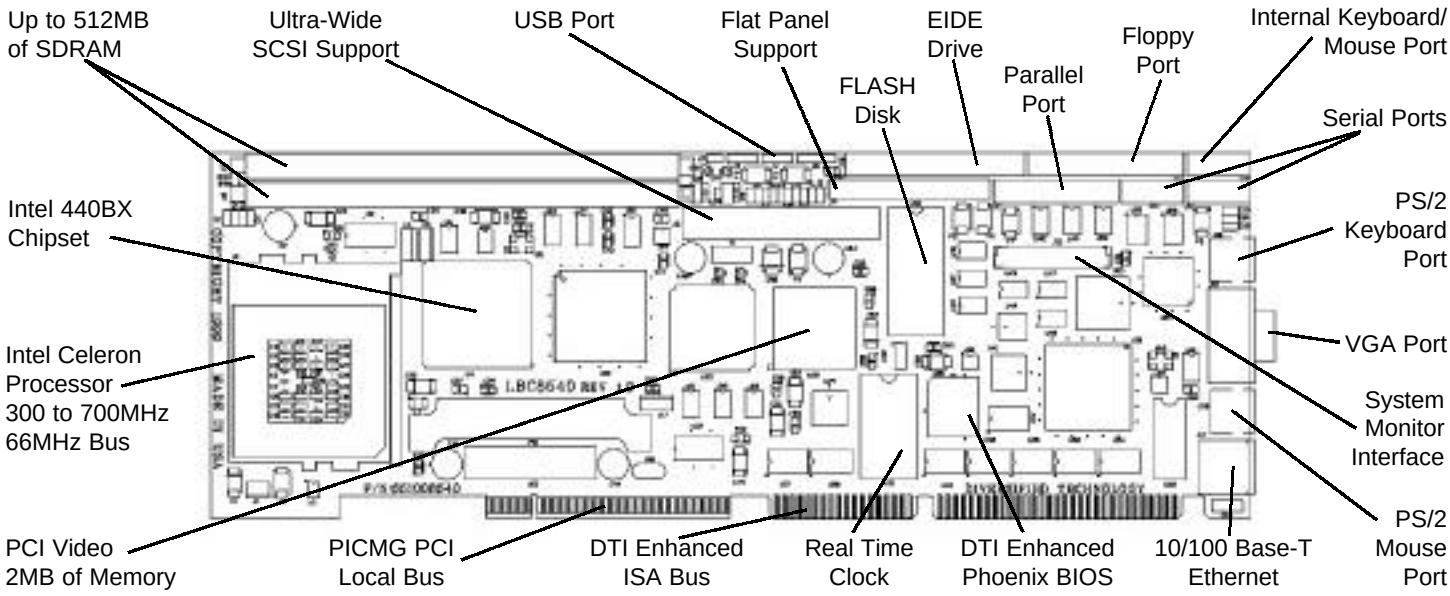
LBC8540 PCI/ISA Single Board Computer



The LBC8540 is a Celeron single board computer which is offered in a full-size /AT PCI PICMG card form factor. The LBC8540 is based on Intel's 66MHz front side bus Celeron processor with the 440BX chipset. Two standard 168-pin DIMM sockets are provided for support of up to 512MB of memory. In addition to the 16KB primary cache, a 128KB secondary (L2) cache device is integrated in the Celeron processor module.

The Intel Celeron processor is Intel's next addition to the advanced 80X86 compatible processor product line. The Intel Celeron processor (PPGA), like its predecessor the Celeron processor (SEPP), is based on the P6 core but is provided in a Plastic Pin Grid Array (PPGA) package for use in lower cost systems in the Basic PC market segment. Like its predecessors, the Celeron processor implements a Dynamic Execution micro-architecture and executes MMX media technology instructions for enhanced media and communication performance. The Intel Celeron processor also uses the same multi-transaction, GTL+, system bus used in the Intel Pentium II processor with a front end bus speed of 66MHZ. Integrated into the Celeron architecture is a 128K level two cache and separate 16K instruction and 16K data level one caches. The Celeron processor also supports multiple low-power states such as AutoHALT, Stop-Grant, Sleep, and Deep Sleep to conserve power during idle times. Support is not provided though for multiple-processor-based systems as was on the Pentium II processor, so that only single processor systems can be provided using the Celeron processor.

The LBC8540 provides enhanced 3D graphics performance by utilizing a C&T 69000 video controller. The video controller provides desktop graphics with full featured high end performance up to extended VGA mode. It also provides support for various flat panels such as VGA, XGA, SVGA, and SXGA active matrix TFT panel displays. Passive matrix flat panels like DSTN and SSTN are also supported. Some of its more notable features are its advanced frame rate control (FRC) for STN panels, auto-expansion and centering for text and graphics modes on high resolution panels, and advanced power sequencing techniques for the panel power and control/data signals. The LBC8540 can support simultaneous display on a CRT and a flat panel.

The LBC8540 implements a 32-bit PCI interface which provides burst transfer speeds up to 133 megabytes per second. It is designed to support four PCI devices, of which all four may be PCI masters and operate at 33MHz. The LBC8540 also provides outstanding ISA support for non PCI adapter cards.

Integrated onboard is Intel's 82558 Ethernet controller. This PCI ethernet interface provides a fully auto-negotiating 10/100 Base-T connection over a standard UTP-5 data grade twisted-pair up to 100 meters in length. Support is provided for full duplex operation, allowing effective data rates to reach 20Mbps and 200Mbps, respectively. Support for Remote-Boot operation for diskless workstations can also be provided. Drivers are available for all of today's popular operating systems.

The LBC8540 provides a high performance Ultra-Wide SCSI interface. Both 8-bit (narrow) and 16-bit (wide) devices are supported. Double-speed Ultra operation is supported, allowing data rates to reach 40MB/s. The SCSI interface is based on Adaptec's industry standard AIC 7880 controller.

A PCI based enhanced IDE interface on the LBC8540 provides excellent performance with all modern high speed IDE drives. It supports 32-bit access, LBA mode, and bootable CDROM. This interface supports enhanced speeds up to PIO mode 4. One or two devices can be supported through this interface. Also, fast DMA modes can be utilized with device drivers in advanced operating systems such as Windows 95 and Windows NT.

The LBC8540 also features DTI's standard System Monitor for monitoring of system critical variables like voltage, temperature, and fan operation. The system monitor provides eight inputs that can be configured as switch closure inputs or strobed inputs useful for monitoring the rotational speed of fans with strobe outputs. A two-stage programmable watchdog timer is built into the system monitor providing a timeout in the case of a software failure. A dedicated serial port is also included allowing the System Monitor to transfer data and diagnostic information through a modem or a CPU-CPU connection.

An onboard flash disk is also provided. Once enabled this device acts like a hard drive and uses standard OS partioning, formatting and coping utilities, without cables and external devices. This allows an LBC8540 to boot to the OS without any floppy or hard drive connected to the system. The embedded flash disk comes in a variety of sizes, currently the maximum available is 72MB. Contact DTI sales to discuss the possibility of size changes to the flash disk.

Standard ISA bus peripherals like PS/2 Keyboard/Mouse Controller, Real Time Clock, floppy controller, RS-232 serial ports, ECP/EPP parallel port, and field upgradeable flash BIOS are also integrated onto the LBC8540.

DTI's enhanced Phoenix BIOS, which includes ROM based SETUP and CONFIGURATION, is year 2000 (Y2K) compliant.

The LBC8540 is designed for operation in passive backplane systems. DTI offers a variety of PCI passive backplane versions, such as the PBP14, PBP16, and the PBP20. The PBP14 provides eight ISA slots, four PCI slots, and a single PCI/CPU slot. The PBP16 provides ten ISA slots, four PCI slots, and a single PCI/CPU slot. The PBP20 provides fourteen ISA slots, four PCI slots, and a single PCI/CPU slot. A comprehensive validation has been completed on this product. Call factory for details.

All products are shipped FOB factory (MS).
Specifications subject to change without notice.

For more information or to order, please contact us.

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